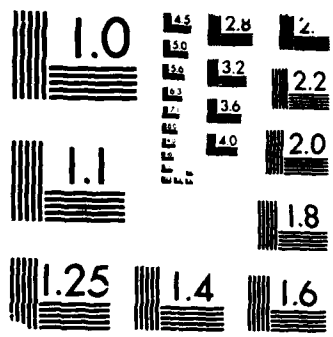
AD-A189 943 CONVERSION OF ICD-9 AND ICPM (INTERNATIONAL CLASSIFICATION OF PROCEDURES I (U) SRMY HEALTH CARE STUDIES AND CLINICAL INVESTIGATION ACTIVITY F

1/1

UNCLASSIFIED S W BAKER ET AL 31 AUG 87 F/G 6/5 NL



(2)

United States Army Health Care Studies and Clinical Investigation Activity

CONVERSION OF ICD-9 AND ICPM DATA TO ICD-9-CM WITH ADAPTATION TO DRGs

EXECUTIVE SUMMARY

MAJ Stuart W. Baker, M.A.
Velda R. Austin, M.S., DAC
Jo Ann Clay, B.S., DAC

Report #87-007

Part A

August 1987

US ARMY
HEALTH SERVICES COMMAND
FORT SAM HOUSTON, TEXAS 78234

87

NOTICE

The findings in this report are
not to be construed as an official
Department of the Army position
unless so designated by other
authorized documents.

* * * * * * * * * * * * *

Regular users of services of the Defense Technical Information Center (per DOD Instruction 5200.21) may purchase copies directly from the following:

Defense Technical Information Center (DTIC)
ATTN: DTIC-DDR
Cameron Station
Alexandria, VA 22304-6145

Telephones: AUTOVON (108) 284-7633, 4, or 5
COMMERCIAL (202) 274-7633, 4, or 5

All other requests for these reports will be directed to the following:

U.S. Department of Commerce
National Technical Information Services (NTIS)
5285 Port Royal Road
Springfield, VA 22161

Telephone: COMMERCIAL (703) 487-4600

UNCLASSIFIED
SECURITY CLASSIFICATION OF THIS PAGE

ADA189943

REPORT DOCUMENTATION PAGE

1a. REPORT SECURITY CLASSIFICATION UNCLASSIFIED	1b. RESTRICTIVE MARKINGS
2a. SECURITY CLASSIFICATION AUTHORITY	3. DISTRIBUTION / AVAILABILITY OF REPORT Approved for public release; distribution unlimited
2b. DECLASSIFICATION / DOWNGRADING SCHEDULE	
4. PERFORMING ORGANIZATION REPORT NUMBER(S) HR 87-007a	5. MONITORING ORGANIZATION REPORT NUMBER(S)
6a. NAME OF PERFORMING ORGANIZATION US Army Health Care Studies & Clinical Investigation Acty 6b. OFFICE SYMBOL (If applicable) HSHN-P	7a. NAME OF MONITORING ORGANIZATION DASG-PSA/DASG-RMZ
6c. ADDRESS (City, State, and ZIP Code) Building 2268 Ft. Sam Houston, TX 78234 San Antonio, TX	7b. ADDRESS (City, State, and ZIP Code) OTSG Skyline 5 Washington, DC
8a. NAME OF FUNDING / SPONSORING ORGANIZATION DASG 8b. OFFICE SYMBOL (If applicable) DASG-RMZ	9. PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER
8c. ADDRESS (City, State, and ZIP Code)	10. SOURCE OF FUNDING NUMBERS PROGRAM ELEMENT NO.: 847714 / PROJECT NO. / TASK NO. / WORK UNIT ACCESSION NO.

11. TITLE (Include Security Classification)
(U) Conversion of ICD-9 and ICPM Data to ICD-CM with Adaptation to DRGs

12. PERSONAL AUTHOR(S)
MAJ Stuart W. Baker, M.A.; Velda R. Austin, M.S., DAC; Jo Ann Clay, B.S., DAC

13a. TYPE OF REPORT	13b. TIME COVERED	14. DATE OF REPORT (Year, Month, Day)	15. PAGE COUNT
Executive Summary	FROM Sep 83 TO Jan 87	87 August 31	

16. SUPPLEMENTARY NOTATION

Keywords

17. COSATI CODES		
FIELD	GROUP	SUB-GROUP

18. SUBJECT TERMS (Continue on reverse if necessary and identify by block number)
(U) Coding, (U) Conversion, (U) mapping, (U) Disease classification, (U) diagnosis grouping, (U) Diagnosis Related Groups, (U) DRG, (U) crosswalk

19. ABSTRACT (Continue on reverse if necessary and identify by block number)
(U) This report documents the methods used to reclassify Army Medical Department (AMEDD) International Classification of Diseases, Ninth Revision (ICD-9) and International Classification of Procedures in Medicine (ICPM) data to International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM). This process required significant interaction with national nosology consultants and civilian universities. The purpose of the reclassification or conversion was to employ a recently developed diagnosis grouping method called Diagnosis Related Groups (DRGs). The AMEDD needed a more clinically relevant method of describing workload and developing meaningful length of stay data. This report describes the success of the reclassification effort as well as the application of DRGs to AMEDD performance. The study concludes that the conversion method is effective and that the data classified into DRGs is a substantial improvement over previous patient grouping methods employed within the AMEDD or by the Office of the Assistant Secretary of Defense for Health Affairs.

20. DISTRIBUTION / AVAILABILITY OF ABSTRACT ☐ UNCLASSIFIED/UNLIMITED ☒ SAME AS RPT ☐ DTIC USERS	21 ABSTRACT SECURITY CLASSIFICATION UNCLASSIFIED
22a NAME OF RESPONSIBLE INDIVIDUAL Major Stuart Baker	22b TELEPHONE (Include Area Code) (512) 221-5671 22c OFFICE SYMBOL HSHN-P

DD FORM 1473, 84 MAR 83 APR edition may be used until exhausted
All other editions are obsolete

SECURITY CLASSIFICATION OF THIS PAGE
UNCLASSIFIED

TABLE OF CONTENTS

LIST OF TABLES

1. INTRODUCTION

Analysts and policy makers interested in applying case complexity methodologies to the Army Medical Department (AMEDD) or Department of Defense (DOD) Medical Treatment Facilities (MTFs) need to accommodate the impact of recoded International Classification of Diseases, Ninth Revision (ICD-9) and International Classification of Procedures in Medicine (ICPM) data to International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM). The ICD-9-CM classification includes many more codes than ICD-9 and ICPM, requiring a number of translation decisions. The results of this conversion process will enable health care analysts to perform longitudinal case mix analyses of AMEDD or DOD inpatient biostatistical data from Fiscal Year (FY) 81- FY 85. The conversion methods employed in this study could be used as the basis for any subsequent conversions between coding conventions. This report details the strengths and weaknesses of the converted data and any limitations and considerations necessary in the application of the data to various projects.

1.1. Purpose

The purpose of this work was to develop a methodology to classify AMEDD biostatistical data using Diagnosis Related Groups (DRGs) enabling MTF level case complexity analysis.

2. OBJECTIVES

The objectives of this study were as follow:

1. Develop a map from ICD-9 and ICPM to ICD-9-CM.

2. Convert AMEDD inpatient data coded in ICD-9 and ICPM to ICD-9-CM.

3. Consult with proprietary data abstracters and related national statistical data bases to reach appropriate conclusions on the nosological implications of the conversion from one convention to another.

4. Create the most equivalent (accurately translated) ICD-9-CM data base to form the basis for assigning worldwide AMEDD data to DRGs.

5. Maximize the accuracy of the recoded data by deliberate, thorough comparison of morbid conditions as documented in the National Center for Health Statistics' (NCHS) National Hospital Discharge Survey (NHDS) Data for 1983.

6. Assign inpatient abstracts to DRGs using the Health Systems International (HSI) Grouper Program released in June, 1983.

3. METHODOLOGY AND DATA LIMITATIONS

3.1. Methodology

Development of the crosswalk from ICD-9 and ICPM to ICD-9-CM was an iterative process. The basic conversion tables that Navy had developed were the starting point of the conversion process. Any diagnosis or procedure

finding a match in the conversion table was given the converted diagnosis or procedure. If a match for a diagnosis was not found in the table, the diagnosis code was output to the new diagnosis field with no change, except that in cases where the fifth digit was blank, a zero was added. If procedure codes found no match in the tables, they were not converted at all, and blanks were written to their corresponding ICD-9-CM field. Analysis of initially converted data using Navy's tables, however, revealed that major expansion of the tables would be required.

A code-by-code review produced a new, expanded version of both the diagnosis and procedure maps. As biometric records were read into a FORTRAN computer program, their diagnoses and procedures were converted using the tables. Additionally, this conversion program recoded certain data elements into a format required by the Health Systems International (HSI) Grouper Program. The original biometric record along with the converted diagnosis and procedure fields and recoded data fields were written to a new file, which was input for the HSI Grouper Program. This program assigned the Diagnosis Related Group (D)RG and, in addition, created additional data fields. The output records from this program were then sorted by hospital and DRG, and reports were created that permitted detailed assessment of appropriateness of conversion of diagnosis and procedure codes. After this assessment, modifications were made to the conversion maps to improve their accuracy, and the entire process was repeated. Six versions of the crosswalks were created before the authors felt the maps had produced the best approximation of data coded in ICD-9-CM.

A by-product of the grouping process was case mix reports. These were developed to assess and validate the mapping and grouping process, but they also became an invaluable tool in assessment of hospital performance.

3.2. Data and Limitations

Data selected for study consisted of inpatient abstracts from the Individual Patient Data System (IPDS) maintained by the US Army Patient Administration Systems and Biostatistics Activity (PASBA) at Fort Sam Houston, Texas. This data system contains abstracts of inpatients from all U.S. Army hospitals, worldwide, as well as some administrative records. The administrative records include abstracts of active duty Army personnel treated in civilian hospitals for their entire period of hospitalization (absent sick cases), as well as those abstracts created for record only (referred to as "Carded for Record Only" (CROs). These administrative records were excluded from the study sample selection.

The IPDS provides a process whereby abstracts can be input into the system after patient discharge but before the clinical data are finalized. When the charts are completed, replacement records are submitted to overlay the earlier record with a more complete abstract. For a variety of reasons some of these earlier records are never replaced, and this particular group of records with incomplete clinical data were excluded from the study sample selection.

Initially, approximately 1.2 million records were selected from FY 81-FY 83. The FY 84-FY 85 data were added to the study sample, making the total record count in excess of two million records. Final records selection was as follows:

Time period of data	FY 81-FY 85
Percent of Inpatient cases	99.4%
Record count by year:	
FY 81	383,178
FY 82	400,525
FY 83	398,568
FY 84	409,628
FY 85	409,586
Total records in sample	2,001,485

The IPDS record is 240 characters in length containing demographic data, eight fields for diagnosis codes and up to eight fields for different procedure codes. The IPDS abstract is compatible in most respects to the Uniform Hospital Discharge Data Set (UHDDS) Abstract (Table 3-1). Additionally, certain data elements unique to military requirements are collected, such as convalescent leave days, supplemental care days, cause of injury, and principal or underlying cause of separation. The records pass through a comprehensive set of edit checks before being added to the system. Consistency checks are made between fields, as well as quality-focused edits. Age- and/or sex-specific diagnoses or procedures are verified. Admission and disposition date sequencing is checked, as well as computation of the days fields (convalescent leave, supplemental care, cooperative care, bed, sick, and other days). Rejected records from the edit processing are corrected and processed again through the edit cycle. Additionally, a quality control section performs quality-focused reviews on certain types of records such as deaths and disability separations, plus a ten percent sample of all records. At the time the record is added to the system, it is as error-free as possible using on-going quality review on a sample basis together with computer editing.

As in any study, results are subject to nonsampling or measurement errors, which include missing abstracts, information incompletely or inaccurately recorded on abstract forms, and processing errors. Missing records are estimated as approximately one percent of the data. This includes those records with clinical data missing. The percentage of the total IPDS data excluded from study (total absent sick cases, CROs, and records with clinical data missing) by year was: FY 81, 5.93 percent; FY 82, 4.33 percent; FY 83, 5.24 percent; FY 84, 4.37 percent; and FY 85, 4.36 percent.

3.3. Modification of IPDS Record Format

The IPDS record was expanded to 352 characters in the study data base incorporating data elements which enabled grouping and recoding action (see Table 3-2). Grouper output variables include such items as MDC, DRG, and return code. Other variables displayed on the output or modified IPDS record include the recoded diagnosis and procedure data and other variables

Table 3-1: UNIFORM HOSPITAL DISCHARGE DATA SET (UHDDS)

DATA ELEMENTS * :	DEFINITIONS:
PERSONAL IDENTIFICATION	The unique number assigned to each patient that distinguishes the patient and his or her hospital records from others in that institution
DATE OF BIRTH	Month, day, and year of birth
SEX	Male or Female
RACE AND ETHNICITY	White, Black, Asian or Pacific Islander Spanish origin/Hispanic Non-spanish origin Non-Hispanic Other.
RESIDENCE	Zip code; Code for foreign residence
HOSPITAL IDENTIFICATION	A unique institutional number within a data collection system
ADMISSION AND DISCHARGE DATES	Month, date, and year of both admission and discharge.
PHYSICIAN IDENTIFICATION:	
ATTENDING	The attending physician, one who is primarily and largely responsible for care of patient from the beginning of the hospital episode.
OPERATING	The operating physician who performed the principal procedure.
DIAGNOSES	All diagnoses that affect the current hospital stay.
PROCEDURES AND DATES	A procedure, the identity (by unique number within hospital) of the person performing the procedure, and the date must be reported.
DISPOSITION OF PATIENT	The discharged status of the patient: Discharged to home (routine discharge) Left against medical advice Discharged to another short-term hospital Discharged to a long-term care institution Died, other.
EXPECTED PAYER FOR MOST OF THIS BILL (Anticipated Financial Guarantor for Services)	Single major source that patient expects will pay the bill.

* As approved in the 1984 Revision of the UHDDS

Table 3-2: MODIFIED IPDS RECORD FORMAT

FIELD DESCRIPTION	FIELD LENGTH	POSITION IN RECORD	TYPE CODES
Reporting Medical Treatment Facility (MTF)	4	1 - 4	AN
Register Number	7	5 - 11	AN
Grade	2	12 - 13	AN
Sex	1	14	A
Age	2	15 - 16	AN
Race	1	17	A
Length of Service	2	18 - 19	AN
Family Member Prefix	2	20 - 21	N
Social Security Number	9	22 - 30	N
Department/Type Beneficiary	3	31 - 33	AN
Zip Code	5	34 - 38	AN
Type Case	1	39	AN
Source of Admission	1	40	AN
Clinic Service	2	41 - 42	AN
Disposition	1	43	A
Date of Disposition	5	44 - 48	N
Date of this Admission	5	49 - 53	N
Date of Initial Admission	5	54 - 58	N
Absent Sick Bed Days This MTF	3	59 - 61	N
Other Days This MTF	3	62 - 64	N
Convalescent Leave/Cooperative Care Days This MTF	3	65 - 67	N
Supplemental Care Days This MTF	3	68 - 70	N
Bed Days This MTF	3	71 - 73	N
Sick Days This MTF	3	74 - 76	N
Transfer to VA Hosp/Autopsy/Civilian Hosp	1	77	AN
Location of Mobilization Operation	2	78 - 79	AN
MTF of Initial Admission	4	80 - 83	AN
Total Absent Sick Days to Date	3	84 - 86	N
Total Other Days to Date	3	87 - 89	N
Total Convalescent Leave/Cooperative Care Days to Date	3	90 - 92	N
Total Supplemental Care Days to Date	3	93 - 95	N
Total Bed Days to Date	3	96 - 98	N
Total Sick Days to Date	3	99 -101	N
Preoperative Bed Days	2	102 -103	N
Cause of Injury	3	104 -106	AN
Underlying/Principal Cause (Deaths,Spns)	1	107	AN
(Internal processing code)	1	108	
Diagnoses: 8 Fields, each 7 characters	7	109 -164	AN
Operations,Surg Procedures: 8 Fields, each 6 characters	6	165 -212	AN
Residual Disability Causing Disability Separation/Retirement	3	213 -215	AN
Supplemental Information		216 -230	
Total Number of Diagnoses Fields Coded	1	231	N

Table 3-2: MODIFIED IPDS RECORD FORMAT (Continued)

FIELD DESCRIPTION	FIELD LENGTH	POSITION IN RECORD	TYPE CODES
Total Number of Procedure Fields Coded	1	232	N
Supplemental Information	8	233 -240	
Recoded Age	3	241 -243	N
Recoded Sex	1	244	N
Discharge Status (Recoded Disposition)	2	245 -246	N
Diagnoses: 8 Fields, each 5 characters, ICD-9 converted to ICD-9-CM	5	247 -286	AN
Operations,Procedures: 8 Fields, each 4 characters, ICPM converted to ICD-9-CM	4	287 -318	AN
Diagnosis Related Group (DRG)	3	319 -321	N
Major Diagnostic Category	2	322 -323	N
Return Code (from Grouper)	1	324	N
MPR (Procedure Used for DRG Selection)	4	325 -328	AN
ADX (Any Diagnosis Used for DRG Selection)	5	329 -333	AN
SDX (Secondary DG Used for DRG Selection)	5	334 -338	AN
Version Control Card (VCC)	12	339 -350	AN
Unused	2	351 -352	

recoded specifically to meet Grouper input requirements (e.g. sex, age, and type of disposition). These values in the record provide the basis for case mix analysis at a variety of levels from aggregate worldwide statistics to individual hospital and department level studies.

3.4. CONVERSION GUIDELINES AND PRINCIPAL CONSIDERATIONS

The following guidelines were developed and employed in the code translation process:

1. The major consideration was the quality of code translation.
2. When there was no equivalent code, clinical judgment was used for code selection.
3. Volume of data coded to particular ICD-9-CM codes in other data bases was used to influence code selection.
4. In cases where choice of code would make a difference in MDC assignment, the code for the most appropriate body system was selected.
5. ICD-9 asterisk (manifestation) codes were mapped to the basic disease when no equivalent code existed in ICD-9-CM.
6. If equivalency of code translation, volume of data for a code in other data bases, and clinical considerations could not effectively facilitate code selection, then a code that would group to a DRG having the most similar title or meaning was selected.

4. DISCUSSION/CONCLUSIONS

Inpatient biometric data from the AMEDD and DOD can be effectively "mapped" from ICD-9 and ICPM to ICD-9-CM. This mapping strategy could be useful to any activity needing to bridge from ICD-9 diagnoses to ICD-9-CM. Since procedure and operation coding systems vary so widely, this procedure map is exclusively designed to adapt ICPM procedure data to ICD-9-CM. A summary of conversion actions resulting in the final map is presented in Table 4-1.

Translation distortion has been minimized allowing users to assume the data reported in the converted data base accurately reflect the distribution of diagnoses likely to be present if the data had been originally coded in ICD-9-CM. Even so, there were certain ICD-9-CM diagnosis and procedure codes which could not be reached through the final mapping from ICD-9. Thus, there are certain DRGs which cannot be assigned without original coding in ICD-9-CM. These DRGs are summarized in Table 4-2. Caveats and limitations to the employment of the map are discussed in detail in the full report.

A chapter-by-chapter analysis of the Ninth Revision, ICD diagnosis data with the data converted to ICD-9-CM was highly consistent. Further, although based on very different populations, the distribution of ICD-9-CM codes in the AMEDD was compatible with the distribution of codes in the 1983 National Hospital Discharge Survey (NHDS) data.

The modification of the format of the IPDS data abstract was an effective method for implementing centralized, abstract-based case mix analyses using DRGs. It offered the necessary storage of the Grouper required input and output data elements. Converted diagnosis and procedure codes as well as other data elements requiring modification from the IPDS system such as age, sex, and type of disposition were placed in the record following conversion. Grouper output was added to each record after the classification processing (e.g. MDC, DRG, and Return Code). It also offers the opportunity to initiate patient level, detailed case complexity analyses for many purposes.

Our preliminary analyses demonstrated the potential DOD application of DRGs to general biometric data and also established linkage to other data systems such as the Uniform Chart of Accounts enabling the implementation of case weighted analysis at cost center level.

This conversion and recoding effort brings a new dimension to medical treatment facility analysis: complexity of care, as measured by DRGs. We now have the ability to analyze the impact of case mix on MTF performance and as a result, create more effective mechanisms to measure productivity potentially resulting in a more accurate allocation of resources. The data base created in this portion of the study will be utilized more fully in the follow-on study which demonstrates case mix data generated for the AMEDD. The five-year DRG data base with converted ICD-9-CM data has been conservatively employed. The utility of this longitudinal DRG data base will allow exploration of trends and assimilation of different perspectives with impact ranging from health and facilities planning to medical program analysis to provider utilization, quality assurance and utilization review.

Table 4-1: SUMMARY OF CONVERSION ACTIONS

	MAP VERSIONS					
	I	II	III	IV	V	VI
ELEMENTS						
Diagnosis Codes changed		X	X	X	X	X
Procedure Codes changed		X	X		X	X
Forced Allocation *					X	X
Records Selection Notes	1-4	1-4	1-4	1-4	1-4	1-4

LEGEND FOR RECORD SELECTION:

1. Excluded absent sick cases, CROs, and records with incomplete clinical information.
2. Recoded age of infants.
3. Deleted procedures done at another hospital from procedure conversion process.
4. Patient age and type of disposition were recoded for the HSI Grouper for all years.

LEGEND FOR MAP VERSIONS:

I. Initial AMEDD map created from exception list received from Navy in September 83.
II. Inclusion of AMEDD selected Obstetrical diagnoses and procedures.
III. Inclusion of Commission on Professional and Hospital Activities (CPHA) recommendations for procedures; also AMEDD derived diagnosis changes.
IV. Inclusion of CPHA diagnosis recommendations with AMEDD modifications.
V. Inclusion of Yale Health Services Management Group (HSMG) recommendations for diagnoses and procedures.
VI. Yale recommendations from round # 2 meetings for both procedures and diagnoses also includes AMEDD resequencing of procedures.

* Records with diagnosis or procedure codes that could not be readily converted to the ICD-9-CM coding convention were assigned or "forced" into the appropriate Diagnosis Related Group. Refer to the section entitled "Discussion of translation problems" for specific coding details.

Table 4-2: DRGs NOT ALLOCATED *

Version VI Conversion Program

DRG	MDC	TYPE	TITLE
27	001	M	TRAUMATIC STUPOR + COMA, COMA>1 HR
50	003	S	SIALOADENECTOMY
210	008	S	HIP + FEMUR PROCEDURES EXCEPT MAJOR JOINT AGE >69 AND/OR C. C.
211	008	S	HIP + FEMUR PROCEDURES EXCEPT MAJOR JOINT AGE 18-69 W/O C. C.
212	008	S	HIP + FEMUR PROCEDURES EXCEPT MAJOR JOINT AGE 0-17
230	008	S	LOCAL EXCISION + REMOVAL OF INT FIX DEVICES OF HIP + FEMUR

* These DRGs could not be allocated in any Year group data because of the nature of the ICD-9 and/or ICPM source code. This table is not the same as a table reflecting zero frequency due to no morbidity for the category or categories named.

Refinement of DRG groupings into subdivisions of the current DRGs would improve their statistical behavior and add confidence to the estimations employing DRGs for the AMEDD and DOD. At this point, we feel subclassification to account for military or DOD unique variables should be done on the consolidated data base being built at Fort Detrick comprised of all service data.

Our preliminary reports on case mix using DRGs on an aggregate and MTF level were influential and highly contributory to developing the understanding of this patient classification application at Department of the Army Surgeon General (DASG) and Office of the Assistant Secretary of Defense for Health Affairs (OASD(HA)). Further, we believe the examples served to support the OASD(HA) initiative to move the service coding practices forward to ICD-9-CM.

Our ability to analyze the impact of coding on MTFs case mix has contributed to and will continue to benefit service biometric coding decisions by providing an "a priori" impact analysis of how the data may be aggregated within a DRG environment.

The DRG data base enables case mix analysis ranging from clinic or UCA cost account level to MTF, region and worldwide level.

DRGs are effective to classify patients into meaningful groups. Although homogeneity of the data in this report reflects many heterogeneous groupings, they are much more homogeneous products than any other classification methodology available to the AMEDD or DOD at this time. Grouping by DRGs accounted for 32 percent of the variation in length of stay in the AMEDD FY1983 data that had been trimmed to plus or minus three standard deviations.

The application of this technique has been labor intensive thus far, but future use of the methodology to any AMEDD or DOD data would be easily accomplished and reasonably inexpensive. No additional data collection was needed to produce the current report or the case mix reports which will follow. With minor modification of the FORTRAN programs currently used, DOD data for all services could be converted to ICD-9-CM and grouped to DRGs with the same accuracy, providing for minor service specific adjustments.

5. RECOMMENDATIONS

1. The AMEDD and DOD should begin using the current DRG classification scheme to classify inpatient cases at all hospitals.

2. The AMEDD and DOD should modify inpatient data collection and abstracting systems to provide for assignment of DRGs and Major Diagnostic Categories (MDCs).

3. Refinement of DRG groupings into subdivisions of the current DRGs should be considered when consolidated Service data are available and studied from a DOD perspective.

4. The services should maintain the ability to classify data to whatever the federally sponsored reimbursement programs require (e.g., the current DRGs). This will mean that Service Biostatistical Counterpart groups and Service Professional Consultants who implement DOD modifications to the current coding convention will need to:

a. Assess the potential impact of a coding classification modification before it is implemented.

b. Insure coordination with the Department of Health and Human Services, Bureau of Data Management and Strategy, ICD-9-CM Coordination and Maintenance Committee. Specifically, an established procedure should be in place to monitor the nature of coding changes as well as to minimize the number of code modifications suggested.

c. When a modification is necessary, it should be presented as a proper sub-categorization consistent with the taxonomy of the classification. The axis of the classification should not be changed, but rather modifications added to existing structure. For example, if the category is built on an axis of etiology, it should not be changed to performance or non-performance of lab testing. Code extensions, which operate within the current code structure, should be considered as a way of gathering required additional detailed data rather than code modifications. The resulting "extended" code would be comparable to national data which could be maintained and used for grouping by existing software.

5. The AMEDD and DOD should designate a DRG coordinating agency to monitor the changes in the DRG system and assess the impact of these changes on the DOD efforts to employ case mix performance measures. This agency should also serve as a point of contact to manage the increasing interest in DRG analyses. As more facility level requests for data are generated, it would be helpful to users and researchers to have a central activity for monitoring DRG developments and an agency that would recommend and implement changes to meet DOD needs addressing coding issues as they arise.

6. Refinement of DRGs should remain a high priority within the AMEDD and DOD. These refinements should consider the potential contribution of other currently available and relevant classification methodologies including Disease Staging, Patient Management Categories, Severity of Illness Index, and Nursing Acuity.

7. Health care providers and managers need to place emphasis on naming and coding diseases. When the medical record of the inpatient is finalized the providers, nursing personnel, medical record professionals and patient administrators should carefully monitor the accuracy and completeness of the encoded data to insure that it reflects the important details of the inpatient episode with special emphasis on principal diagnosis and surgical procedures.

6. DISTRIBUTION

Deputy Under Secretary (Operations Research), Department of the Army, ATTN: Mr. Walter Hollis, The Pentagon, Rm. 2E660, WASH DC 20310 (1)
Deputy Assistant Secretary of Defense (Medical Resources Management), Rm. 3E336, The Pentagon, WASH DC 20310-2300 (3)
Office of Assistant Secretary of Defense for Health Affairs, ATTN: MRA (CAPT Reider), The Pentagon, WASH DC 20301 (1)
Office of Assistant Secretary of Defense for Health Affairs, ATTN: OPA&QA(COL Pittman), The Pentagon, WASH DC 20301 (1)
Office of Assistant Secretary of Defense for Health Affairs, ATTN: DMSSC-HA (Mr. Andreoni), The Pentagon, WASH DC 20301 (1)
Director, Office of Civilian Health and Medical Program of the Uniformed Services, ATTN: HPM, WASH DC 20301 (1)
Army Study Program Management Office, ATTN: DACS-DMO/Mrs. Joann Langston, The Pentagon, Rm. 3C567, WASH DC 20310-0200 (1)
Director, Defense Medical Facilities Office, 5111 Leesberg Pike, Falls Church, VA 22041 (1)
Office of Assistant Secretary of Defense for Health Affairs, The Pentagon, WASH DC 20301 (5)
Army Study Program Management Office, ATTN: DACS-DMO/Mrs. Joann Langston, The Pentagon, Rm. 3C567, WASH DC 20310-0200 (1)
Dir, The Army Library, ATTN: ANR-AL-RS (Army Studies), Rm. 1A518, The Pentagon, WASH, DC 20310 (1)
Administrator, Defense Logistics Agency, DTIC, ATTN: DTIC-DDAB, Cameron Station, Alexandria, VA 22304-6145 (2)
Defense Logistics Studies Information Exchange, ALMC, ATTN: Mrs. Alter, Ft. Lee, VA 23801-6043 (1)
Dir, Joint Medical Library, Offices of The Surgeon General, USA/USAF, ATTN: DASG-AAFJML, The Pentagon, Rm 1B743, WASH DC 20310 (1)
HQDA (DASG-ZA), 5111 Leesberg Pike, Falls Church, VA 22041-3258 (2)
HQDA (DASG-PSA), 5111 Leesberg Pike, Falls Church, VA 22041-3258 (3)
HQDA (DASG-PSC), 5111 Leesberg Pike, Falls Church, VA 22041-3258 (1)
HQDA (DASG-PSP), 5111 Leesberg Pike, Falls Church, VA 22041-3258 (1)
HQDA (DASG-HCD-S), WASH DC 20310-2300 (1)
Medical Library, BAMC, Reid Hall, Bldg 1001, Ft. Sam Houston, TX 78234-6200 (1)
Stimson Library, AHS, Bldg. 2840, Ft. Sam Houston, TX 78234-6100 (1)
Cdr, USA Health Services Command, ATTN: HSCG, Ft. Sam Houston, TX 78234-6060 (1)
Cdr, USA Health Services Command, ATTN: HSDA, Ft. Sam Houston, TX 78234-6060 (1)
Cdr, USA Health Services Command, ATTN: HSCL, Ft. Sam Houston, TX 78234-6060 (1)
Cdr, USA Health Services Command, ATTN: HSCL-A, Ft. Sam Houston, TX 78234-6060 (1)
Cdr, USA Health Services Command, ATTN: HSCL-S, Ft. Sam Houston, TX 78234-6060 (1)
Cdr, USA Health Services Command, ATTN: HSCL-C, Ft. Sam Houston, TX 78234-6060 (1)
Cdr, USA Health Services Command, ATTN: HSCL-P, Ft. Sam Houston, TX 78234-6060 (1)
Cdr, USA Health Services Command, ATTN: HSCL-N, Ft. Sam Houston, TX 78234-6060 (1)

Cdr, USA Health Services Command, ATTN: HSCL-Q, Ft. Sam Houston, TX 78234-6060 (1)
Cdr, USA Health Services Command, ATTN: HSCL-PAD, Ft. Sam Houston, TX 78234-6060 (1)
Cdr, USA Health Services Command, ATTN: HSIO, Ft. Sam Houston, TX 78234-6060 (1)
Cdr, USA Health Services Command, ATTN: HSRM, Ft. Sam Houston, TX 78234-6060 (3)
Cdr, USA Health Care Studies and Clinical Investigation Activity, ATTN: HSHN-P (25)
Cdr, USA Patient Administration Systems and Biostatistics Activity, ATTN: HSHI-QZ, Ft. Sam Houston, TX 78234-6060 (1)
Cdr, USA Patient Administration Systems and Biostatistics Activity, ATTN: HSHI-QBS, Ft. Sam Houston, TX 78234-6060 (4)
Cdr, USA Patient Administration Systems and Biostatistics Activity, ATTN: HSHI-QBP, Ft. Sam Houston, TX 78234-6060 (3)
Commandant, Academy of Health Sciences, US Army, ATTN: HSHA-ZA, Fort Sam Houston, TX 78234-6100 (1)
Commandant, Academy of Health Sciences, US Army, ATTN: HSHA-MFS, Fort Sam Houston, TX 78234-6100 (1)
Commandant, Academy of Health Sciences, US Army, ATTN: HSHA-IHC, Fort Sam Houston, TX 78234-6100 (1)
Commandant, Academy of Health Sciences, US Army, ATTN: HSHA-IHC(PAD), Fort Sam Houston, TX 78234-6100 (2)
HQ USAF/SGHA, Bldg. 5681,Bolling AFB, WASH DC 20332-6188 (1)
HQ USAF/SGSB, ATTN: AFOMS/SGSB, Brooks AFB, TX 78235-5000 (1)
Commander, Naval School of Health Sciences, Bethesda, MD 20814 (1)
Commander, Naval Medical Research and Development Command, Department of the Navy, Bethesda, MD 20814 (1)
Commander, Naval Medical Command (MEDCOM-13), WASH DC 20372-5120 (1)
Cdr, Naval Medical Data Services Center, ATTN: Mr. Gary Kreizman, Technical Director of Medical Statistics, Bethesda, MD 20814-5066 (1)

END

DATE

FILMED

4-88

DTIC